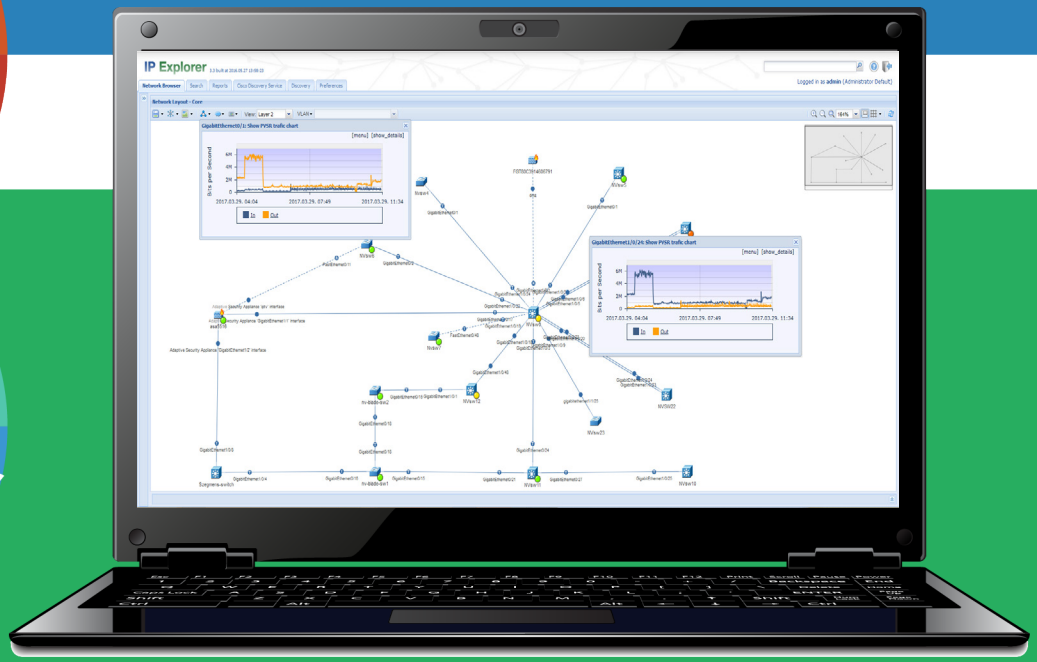
Automatic network discovery, documentation & visualization

IP Explorer

NETvisor



AUTOMATIC NETWORK DISCOVERY, DOCUMENTATION & VISUALIZATION

IP Explorer

FOR TELECOMMUNICATION SERVICE PROVIDERS, UTILITIES AND ENTERPRISES

Lack of up to date network information makes daily operation of large communication networks difficult. Most network management processes depend on the availability of these data. Almost every tool that supports operations support processes (such as troubleshooting, configuration and performance management) has some sort of network discovery functionality. However, these tools usually provides minimum functionality and limited range of data minimally necessary for the operation of the management system. IP Explorer is unique in that it is a fully automated, end-to-end product for discovering and visualizing the whole L2/L3 network infrastructure and documenting inhomogeneous IP/Ethernet/MPLS networks.

IP Explorer offers

- Network discovery with comprehensive functionality and the widest possible scope of up-to-date network information to ensure 360-degree visibility,
- Fully automated, end-to-end discovery of any heterogeneous IP/Ethernet/MPLS network,
- Vendor-independent model for storing the discovered network, visualized on a feature-rich Web interface,
- Fast and easy creation of network documentation based on real-life, up-to-date information,
- Standards-compliant open interface that enables any higher-level management process to access current network information.

Certified Cisco **Smart Advisor** Tool

Benefits

UNIQUE FOR DOCUMENTING INHOMOGENEOUS NETWORKS

IP Explorer provides comprehensive network discovery and visualization solution for the whole L2/L3 network infrastructure. Network devices of various major vendors (e.g. Cisco, Alcatel, Juniper, HP, Huawei, ZTE, NEC) are supported in a unified way. Using standard protocols used in industrial environments, it also supports - IP based - factory infrastructure discovery Even as a stand-alone application, IP Explorer also performs an interactive network documentation function, including MPLS VPN and spanning tree visualization, as well as identifying the location of endpoint devices in the network. It has a high availability, highly scalable, distributed data collection platform.

SUPPORTS DATA MAPPING DUE TO ITS VENDOR INDEPENDENT IP NETWORK DATA MODEL

IP Explorer is based on a vendor-independent IP network model designed in compliance with the SID model developed by the Telemanagement Forum. The main advantage of the data model designed in accordance with SID recommendations is that it supports data mapping between systems developed along similar concepts when these are integrated into the same application environment.

FLEXIBLE ARCHITECTURE FOR EASIER INTRODUCTION OF A NEW DEVICE TYPE

ConnectorServer module implement the communication with the network devices. Via the management protocols supported by the given device type (SNMP, TELNET, SSH, HTTP, CIP, Modbus, Snap7, etc.), the ConnectorServer module queries the network configuration of the given device and the neighboring devices. The results are used for the comprehensive discovery of the network. In order to support a new device type, it is sufficient to extend this one module.

CUSTOMIZABLE ACCORDING TO INDIVIDUAL NEEDS

System information can be accessed through a rich web-based user interface. Features include browsing the inventory-level information and configuration details of the network elements, as well as viewing, customizing and arranging topological diagrams.

EASY TO INTEGRATE INTO OPERATIONS SUPPORT SOLUTIONS

The full functionality open SOAP northbound interface enables integration with higher-level applications and automated processes, and all details discovered by the product can be queried. Based on the documentation and the service definition file, anyone can integrate IP Explorer into an existing management environment. IP Explorer is built on open standards and it is easily expandable.

Use Cases

IP EXPLORER AUTOMATES THE NETWORK DOCUMENTATION PROCESS

The time required for documenting and making an inventory of large networks significantly decreases while the accuracy improves. Furthermore, the inconsistency resulting from changes during the documentation process dramatically declines.

IP EXPLORER EFFECTIVELY SUPPORTS NETWORK-PLANNING PROCESS

The up-to-date structure of the network and accurate information on free capacities are available before the design begins.

IP EXPLORER SIMPLIFIES FAULT MANAGEMENT

The discovered network information accelerates the identification of the direct cause of a failure (root cause error). During impact analysis, it is easier to reveal what services are affected by an error and whom the clients concerned. This gives the opportunity to correct the problem before the customer would notice it, thus indirectly increasing customer satisfaction.

Key Features

MANAGING LARGE NETWORKS

During managing a large network, it may be important that we can break it into smaller parts along several criteria, such as geography or its internal logic. IP Explorer supports two types of such segmentation:

DOMAINS

Given the small number of assignable IP addresses in IPv4, several companies and organizations use certain address ranges in parallel for their internal networks. By deploying domains in IP Explorer, you can manage multiple of these clients on a single interface.

BREAKDOWN BY REGIONS

Breakdown by regions enables load distribution and traffic optimization.

SAFE OPERATION: FAULT TOLERANCE, HIGH AVAILABILITY, LOAD DISTRIBUTION

IP Explorer modules can be run in multiple copies and the modules with identical roles are able to take over the tasks of another failing module, ensuring continuous operation and high availability. With several modules running concurrently, even if no error occurs, these modules distribute their tasks among themselves and thereby improve the load distribution of the system.

DETAILED DEVICE AND NETWORK TOPOLOGY DISCOVERY

A network discovery process should inform the user about what devices the network consists of, what the structure of these devices are, how they are configured and connected with each other. Accordingly, information collected by IP Explorer about a network includes:

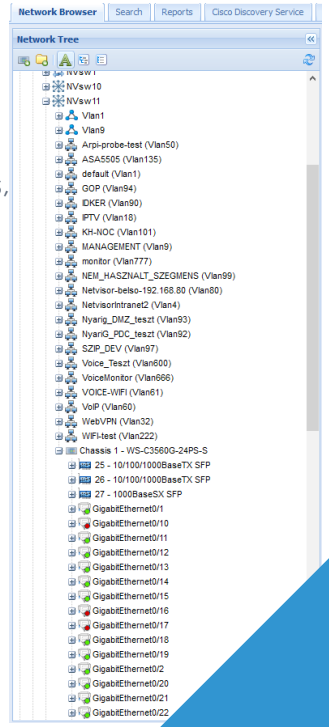
INVENTORY INFORMATION

- Device list with details
- Physical structure of the devices, component details

DEVICE CONFIGURATIONS

NETWORK TOPOLOGY INFORMATION

- Physical connections
- Logical connections
- Spanning tree information
- Location of endpoint devices



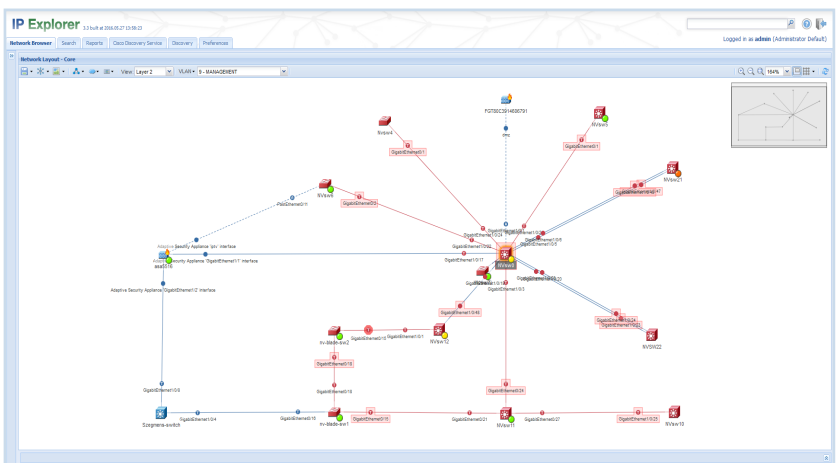
Key Features

VISUALIZATION, DOCUMENTATION

The users want not only to see the data collected from the network, but also to use and pass on to other systems. IP Explorer meets these demands and this functionality makes it stronger over its competitors. Its key features are the following:

NETWORK VISUALIZATION

IP Explorer can automate organization of views along hierarchy according to defined criteria and users can form views by arbitrary demands.

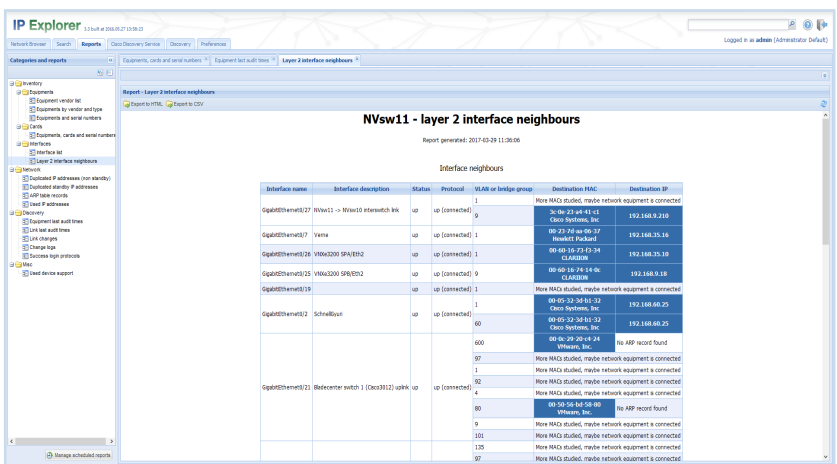


Network topology

Visualization of the network is vector graphical. The layout is automatic by default, and later can be manually edited and saved for re-use. Device icons are displayed by device type and connections are visualized by bandwidth. Interactive diagrams allow drilldown to more detailed levels of the network documentation. Alarms from any performance measurement or fault management systems can be displayed on the topology.

NETWORK DOCUMENTATION

The displayed figures from the topographical diagrams can be exported to .pdf or .svg vector format. The vendor-independent relational database model of IP Explorer enables creating reports of any complexity. Built-in functionality allows retrieval of a wide variety of specific details.

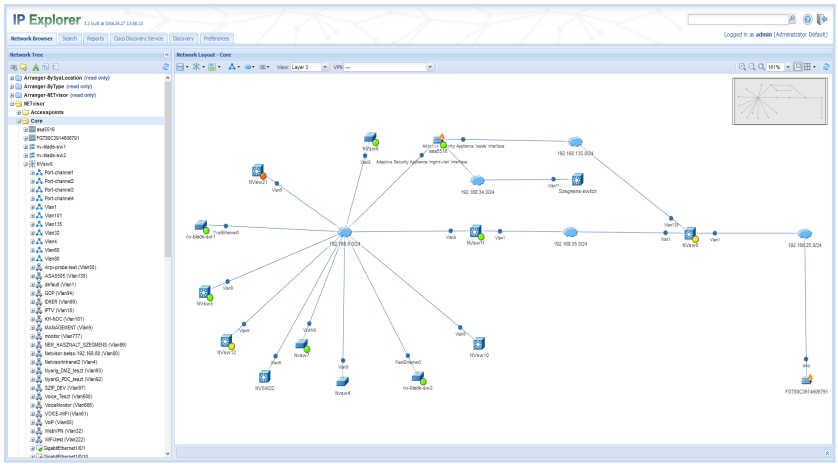


Key Features

IP EXPLORER IN OPERATIONS SUPPORT

IP Explorer offers factory integration to NETvisor PVSR performance monitoring product. During discovery, IP Explorer controls PVSR that performance monitoring of discovered devices begin as soon as possible. To start monitoring successfully, IP Explorer fully sets the parameters of PVSR.

On the user interface of IP Explorer, it is possible to display any data from any external system on the other hand to jump to any external application.



IP Explorer

in an Operations Support Solution

1 Automate

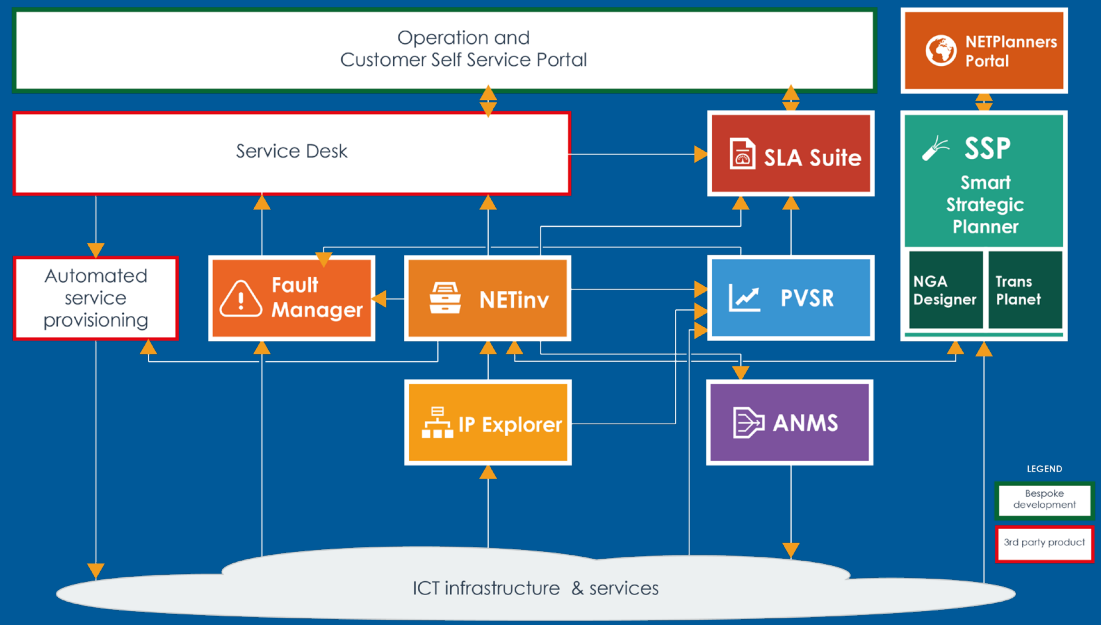
the network documentation and inventory process.

2 Visualize

any heterogeneous IP/Ethernet/ MPLS networks.

3 Support

network design & fault management processes by accurate & up-to-date information.



NETvisor

improving the quality & efficiency of ICT services

2018

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